इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”
Mazdoor Kisan Shakti Sangathan
“The Right to Information, The Right to Live”

“पुराने को छोड नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

IS 11294-1 (1985): Side Scuttles for Inland Vessels, Part 1: General Requirements [TED 18: Inland, Harbour Crafts and Fishing Vessels]

“ज्ञान से एक नये भारत का निर्माण”
Satyanarayan Gangaram Pitroda
“Invent a New India Using Knowledge”

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

Made Available By
Public.Resource.Org

“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”
Bhartṛhari—Nītiśatakam
“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE

BRUTUM FULMEN

IGNORANTIA JURIS NON EXCUSAT

PROTECTED BY COPYRIGHT

UDC : 629·122·011·83

IS : 11294 (Part 1) - 1985

Indian Standard (Reaffirmed 2005)

SPECIFICATION FOR SIDE SCUTTLES FOR INLAND VESSELS

PART 1 GENERAL REQUIREMENTS

1. Scope

1.1 This standard (Part 1) cover the general requirements, materials and tests for side scuttles meant for vessels for inland navigation.

1.2 This standard is not applicable to vessels plying in open sea conditions.

2. Terminology

2.0 For the purpose of this standard, the following definitions shall apply.

2.1 *Batch* — A definite quantity, of same type of side scuttles manufactured or produced under conditions which are presumed uniform.

2.2 *Deck House* — A deck structure on the main deck or above other than a superstructure.

2.3 *Main Deck* — The uppermost complete deck having permanent means of closing of openings in exposed portions of the weather deck in accordance with relevant statutory rules.

2.4 *Nominal Size of Ships' Side Scuttle* — This is the clear opening of glass and is also referred to as clear light size (*d*).

2.5 *Superstructure* — A deck structure on the main deck extending from side-to-side of the vessels or with the side plating not being in board of the shell-plating more than four percent of the breadth.

2.6 *Toughened Safety Glass* — A glass which is produced by subjecting it to a process of heating and rapid cooling so as to induce high compressive stresses in the surface, zones balanced by a high tension in the central plain. If fractured, it should disintegrate into small pieces and, in addition, it should have a high resistance to external forces, such as mechanical loading and thermal shock due to changes of temperature.

3. Types

3.1 The side scuttles for inland vessels shall be of the following types:

Types	Opening						Non-Opening	
	Right-Hand		Left-Hand		Common-Hinge		With Dead-light	Without Dead-light
	With dead-light	Without dead-light	With dead-light	Without dead-light	With dead-light	Without dead-light		
Type Abbreviation	ORD	OR	OLD	OL	OCD	OC	NOD	NO

Adopted 16 May 1985

© November 1985, ISI

Gr 2

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Inland and Harbour Craft Sectional Committee, MCPD 2 [Ref : Doc : MCPD 2 (603)]

3.1.1 *Right-hand side scuttle* — A scuttle with the hinge on the glass holder on the right side when viewed from the side towards which it opens and the deadlight opening upwards (*see* Fig. 1).

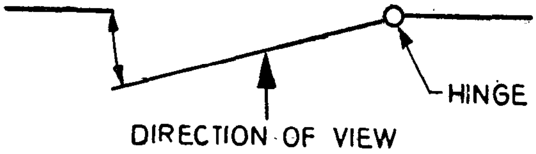

FIG. 1 RIGHT-HAND SIDE SCUTTLE

3.1.2 *Left-hand side scuttle* — A scuttle with the hinge of the glass holder on the left side when viewed from the side towards which it opens and the deadlight opening upwards (*see* Fig. 2).

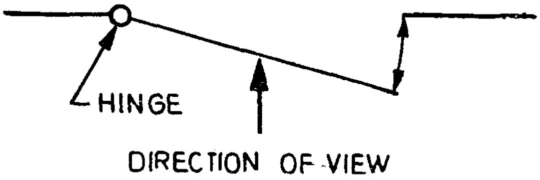

FIG. 2 LEFT-HAND SIDE SCUTTLE

3.1.3 *Common hinge side scuttle* — A scuttle with both the glass holder and deadlight on the same top hinge pin.

4. Sizes

4.1 The nominal size (*d*) of the side scuttles shall be 200, 250 and 300 mm.

4.2 The thickness of the glass shall be 8 mm *Min* in case the lower edge of side scuttles are less than 2·5 m above the water line. If the lower edge of the side scuttle is 2·5 m or more above the water line the thickness shall be 6 mm *Min*.

5. Material

5.1 The material used for the construction of side scuttles shall be as given in Table 1.

6. General Requirements

6.1 Side scuttles may be cast or fabricated. Side scuttles frames may be fixed to the vessel side plate by riveting, by blots or by welding.

6.2 A complete side scuttle consisting of the frame, glass holder and deadlight shall be of good workmanship and finish. The sealing strip used for ensuring watertightness between the glass holder and main frame, and also between the deadlight and the glass holder shall be of good quality rubber and rubber shall be fixed in grooves by a suitable adhesive. To ensure watertightness, material other than rubber may also be used provided this material is oil and water resistant and fire retardant.

7. Tests

7.1 *Prototype Test*

7.1.1 *Tests on component parts* — The tests on frames and deadlights shall be carried out on all new designs. Three frames/deadlights from each batch shall be tested to destruction by being bent when cold and before being machined. Each frame/deadlight shall be capable of being bent through an angle of 20° without showing signs of fracture. The bending may be carried out by blows or by pressure.

7.1.1.1 *Additional tests before rejection* — If the tests samples fail to fulfil the requirements as laid in **7.1.1**, two further tests of the same kind shall be carried out; if any of these tests fail, the batch represented by these samples shall be rejected.

TABLE 1 MATERIAL AND ITS MINIMUM TENSILE STRENGTH AND ELONGATION

(*Clause* 5.1)

Components	Material	Minimum Tensile Strength, N/mm^2	Minimum Elongation Percent	Indian Standards
Frames	Brass, naval brass, gun metal, steel and aluminium alloy	140	3	IS : 291 - 1977 Naval brass rods and sections (suitable for machining and forging) (*second revision*) IS : 292 - 1961 Brass ingots and castings (*revised*) IS : 318 -1981 Leaded tin bronze ingots and castings (*second revision*) IS : 617 - 1975 Aluminium and aluminium alloy ingots and castings for general engineering purposes (*second revision*) IS : 733 - 1975 Wrought aluminium and aluminium alloy bars, rods and sections (for general engineering purposes) (*second revision*) IS : 1264 - 1981 Brass gravity die castings ingots and castings (*second revision*) IS : 1570 (Part 5) - 1972 Stainless steel and heat resisting steel (*first revision*) IS : 3039 - 1980 Structural steels for construction of hulls of ships (*first revision*)
Glass holder	Brass, naval brass, gun metal and aluminium alloy	140	3	
Retaining ring	Brass, naval brass, gun metal and aluminium alloy	140	3	
Deadlight	Brass, naval brass, gun metal, steel and aluminium alloy	140	3	
Swing bolt	Naval brass and stainless steel	250	14	
Hinge pins and locking pins	Stainless steel	250	14	
Nuts	Cast brass, and cast aluminium alloy	180	8	
Toughened safety glass	—	—	—	IS : 6180 - 1971 Toughened safety glasses for ships' side scuttles
Sealing strip	—	—	—	IS : 8809 - 1978 Gaskets for ships' side scuttles and rectangular windows

7.2 *Tests for Completed Side Scuttles* — Completed side scuttles without glass with closed deadlight shall be subjected to a punch test with 60 kPa* test pressure in accordance with the method given below.

7.2.1 *Method of conducting the test* — The punch shall be placed on the side of the deadlight which will come in direct contact with weather. When necessary, 100 mm diameter and 10 mm thick place may be placed between punch and the deadlight. When subjected to a pressure of 60 kPa*, the permanent deformation of the deadlight shall not exceed one percent of the nominal diameter of the side scuttle. If this value is exceeded, the deadlight shall be rejected.

7.3 *Routine Tests*

7.3.1 *Watertightness test for completed side scuttle* — The side scuttles shall be tested hydraulically with glass and open deadlight, as well as without glass and closed deadlight, with a test pressure of 50 kPa. The test shall be carried out according to **11.1.1** of IS : 5474 (Part I) - 1969 "Ships' side scuttles: Part 1 General requirements".

8. Designation

8.1 Side scuttles shall be designated by:

a) the name;
b) type abbreviation (*see* **3.1**);
c) nominal size;
d) the number of this standard; and
e) material.

Example:

An inland vessel's scuttle of right-hand opening type and with deadlight and of 300 mm nominal size made of aluminium alloy shall be designated as:

Side Scuttle 300 ORD IS · 11294 (Part I) Al

9. Marking

9.1 The scuttle frame, glass holder and deadlight shall be marked with the nominal size and manufacturer's name or recognized trade-mark.

9.2 *ISI Certification Marking* — Details avialable with the Indian Standards Institution.

EXPLANATORY NOTE

Indian Standard specification IS : 5474 (in 20 parts), which take into account the provision of SOLAS and International Loadline Convention besides the work of technical committee on shipbuilding of International Organization for Standardization (ISO/TC 8), prescribes requirements of side scuttles for ocean going ships. These requirements are considered relatively rigid for the side scuttles meant for the vessels for inland navigation. Hence the need for developing this standard.

This standard (Part 1) covers general requirements. The specifications for components of side scuttles and installation will be covered in subsequent parts.

---

*100 kPa = 1 bar = 1 kgf/cm^2.

Printed at Swatantra Bharat Press, Delhi, India